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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,447

09/19/2006

Markku Rosnell

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VENABLE LLP

P.O. BOX 34385

WASHINGTON, DC 20043-9998

EXAMINER

ANDREWS, DAVID L

ART UNIT

PAPER NUMBER

3672

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,447	ROSNELL, MARKKU	
	Examiner	Art Unit	
	David Andrews	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/19/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/16/2008</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

The preliminary amendment filed 9/16/2008 has been entered.

Drawings

The drawings are objected to under 37 CFR 1.84(h) for having views not labeled separately. Figures 4, 5, 8 and 9 all contain multiple views under the same figure heading, but should each have their own designation. It should be noted that the specification may require revision to correspond to drawing changes, e.g. if Fig. 4 is changed to Fig. 4A and Fig. 4B, the specification, at the Brief Description of Drawings, must likewise be changed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 3, 5, 10 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites “at least one bit member mounted on its arm elements” where arm elements have no antecedent basis but later recites that the blade assembly comprises “arm elements”, and it is unclear if these two recitations are directed to the same structure or not. As best understood by the examiner, however, these are the same structure and will be examined as such.

Claim 3 recites "such as corrugation, a serration and/or the like" which is indefinite language since the bounds of the claim are indeterminate.

Claim 5 recites "wherein the at least one bit member has an inclination angle of 14.5° and/or an incidence/cutting angle of 15°", the meaning of which is unclear since these angles, as defined by figures 5, appear to represent the same quantity.

Claim 10 recites "wherein a bevel establishing the bit member's cutting face is surface ground to an angle of 25°" of which the meaning is unclear since it is not clear if the cutting face meets the ground surface at such an angle or the bevel is at that angle relative to the disc or ground.

Claim 12 recites "wherein the angle of each bit member relative to the drilled surface is the inclination angle" which does not appear to give any further limitation to the parent claim, since the limitation, as reads, only requires a pre-existing angle to have a new term label.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Thomas (US 1,438,876). Thomas discloses a blade assembly comprising: a shank (10); a bit head (fig 1); wherein the shank comprises elements for mounting the bit head

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(bolts seen in figs 1-3); wherein the bit head comprises at least one disk-shaped bit member (16, 17) which rotates during a drilling operation and which has an outer rim thereof working as an actual cutting face in drilling and wherein the bit member is disposed at an angle of less than 45° relative to a drilled surface (fig 2); wherein the shank comprises a structure which projects in two or more directions (13) and which has the bit members mounted on its arm elements in a dismountable fashion (via bolts seen in figs 1-3); wherein the blade assembly further comprises arm elements projecting laterally from the shank in a substantially horizontal plane (13), the arm element being shaped such that the angle of each bit member lies within the range of 5° - 30° relative to the drilled surface (fig 2); wherein the bit member is mounted on the arm using a screw connection (figs 1-3); wherein the angle of each bit member relative the drilled surface is the inclination angle.

Claims 1, 2, 11 and 12 rejected under 35 U.S.C. 102(b) as being anticipated by Thomas (US 893,950). Thomas discloses a blade assembly comprising: a shank (1); a bit head (fig 1); wherein the shank comprises elements for mounting the bit head (5, 8); wherein the bit head comprises at least one disk-shaped bit member (7) which rotates during a drilling operation and which has an outer rim thereof working as an actual cutting face in drilling and wherein the bit member is disposed at an angle of less than 45° relative to a drilled surface (fig 2); wherein the shank comprises a structure which projects in two or more directions (2) and which has the bit members mounted on its arm elements in a dismountable fashion (via 5, 8); wherein the blade assembly further

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comprises arm elements projecting laterally from the shank in a substantially horizontal plane (2), the arm element being shaped such that the angle of each bit member lies within the range of 5-30° relative to the drilled surface (fig 2); wherein the bit member is mounted on the arm using a screw connection (col. 2, lines 60-61); wherein the angle of each bit member relative the drilled surface is the inclination angle.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas ('950 or '876) in view of Brown (US 2,329,388). Thomas discloses all the limitations of these claims, as applied to claim 1 above, except the bit member having means for enhancing the drilling action, or a pilot drill. Brown discloses a blade assembly comprising a serrated edge for enhancing drilling action (15) and a pilot hole boring central drill (11) wherein the drill is a twist drill. It would have been obvious to one of ordinary skill in the art at the time of invention to provide the centering pilot twist drill and cutting surface serrations as Brown on the drill of Thomas since combining prior art elements according to known methods to yield predictable results is considered obvious to one of ordinary skill (MPEP 2141 III, rationale A).

Claims 6, 7, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas ('950 or '876) in view of Meyer (US 1,990,341). Thomas discloses all the limitations of these claims, as applied to claim 1 above, except for a means for adjusting the bit member. Meyer discloses a blade assembly where blades are attaches to a shank via a means for adjusting the distance of a bit member with respect to a center axis of the shank (14, 19), wherein the means comprises an elongated attachment hole in the shank (14) and wherein the attachment is flexible (considered flexible since it may be adjusted). One of ordinary skill in the art in applying the teachings of Meyer to Thomas would place the elongated attachment hole in an arm of the shank. It would have been obvious to one of ordinary skill in the art at the time of invention to provide the bit members of Thomas with adjustment means as taught by Meyer since use of a known technique to improve similar devices in the same way is considered obvious to one of ordinary skill (MPEP 2141 III, rationale C).

Claims 5, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas ('950 or '876). Thomas discloses all the limitations of these claims, as applied to claim 1 above, and including establishing a bevel of the cutting face at an angle of 25° (figs 2), but does not disclose an inclination angle of 14.5° and/or an incidence cutting angle of 15°, nor manufacturing the bit member in 1.5-3.5 mm gauge steel sheet. However, it is considered obvious to one of ordinary skill at the time of invention to make the inclination or incidence cutting angle of 14.5° or 15° since it has been held that discovering an optimum value of a result effective variable involves only

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routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Further, it is considered obvious to one of ordinary skill in the art at the time of invention to use 1.5 - 3.5 mm gauge sheet steel to manufacture the bits since it has been held to be within the general skill of a working in the art to select a known material on the basis of the suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Allowable Subject Matter

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Andrews whose telephone number is (571)272-6558. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David J. Bagnell/
Supervisory Patent Examiner, Art Unit 3672

DLA
10/28/2008